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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,813	06/09/2001	Francis F. Cohan IV	1043.001US1	5045

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SAMMAMISH, WA 98074

EXAMINER
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NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/681,813

Applicant(s)

COGHAN, FRANCIS F.

Examiner

Kimnhung Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This Application has been examined. The claims 1-20 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-11, 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zloof (US 5,489,922) in view of Hayashi (JP 08-054980).

Regarding claim 1, Zloof discloses in figures 1-2, a pointing device comprising a housing (22) substantially shaped to fit a finger of a user; a click sensor disposed within an underside of the housing, the click sensor actuated by the user pressing the underside of the housing through the finger against a first external surface with sufficient force (see pressure sensing element 46, see column 5, lines 3-14). Further, Zloof discloses in figure 12 that the pressure sensors (70) disposed within a surface of the housing, the pressure sensor detecting relative movement of the surface of the housing along two axes (vertical and horizontal directions), and caused by relative movement of the finger of the user and to cause a pointer on the screen of a computer to correspondingly move (see figure 12, column 4, lines 53-65). However, Zloof does not disclose a optical sensor disposed within a surface of the housing, the optical sensor detecting relative movement of the surface of the housing along two axes against a second external surface caused by relative

movement of the finger of the user to cause a pointer on a screen of a computer to corresponding move. Hayashi discloses in figures 1-2, an optical mouse (3) having optical sensor to detect the X and Y directions (see optical fiber from connection cable 3, and connected to finger 2 made of elastic material, abstract, see 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an optical mouse having optical sensor to detect the X and Y directions and connected to finger as taught by Hayashi into the system having the first and second external housing of Zloof because this would detect the migration direction and movement magnitude by forming the optical pattern in the mouse pad and reading this optical pattern optically (see 0002).

Regarding claims 2-3, 6-7, Zloof discloses in figures 1-2, a pointing device comprising a housing (22) substantially shaped to fit a finger of a user as discussed in claim 1.

However, Zloof does not disclose the grip usage of tip of the finger of the user and the housing is from a flexible, glove-like material. Hayashi discloses the pointing device; further comprising the grip used of tip of finger and the housing is from a flexible, glove-like material (see figures 1-2, see fingers 2, 4, 5 made of elastic material, see 0017).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the grip usage of tip of the finger and the housing is from a flexible, glove-like material as taught by Hayashi into the system having the first and second housing of Zloof because this would be worn on the physical fingers of person to protect the fingers as safety and gloves maybe use as hand sensing device such as measures the configuration of the hand.

Regarding claim 4, Zloof does not disclose that wherein the finger of the user is an index finger of the user. Hayashi discloses that the optical mouse having finger is an index finger (see fore finger 5, figure 1-2, see 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an the finger of user is an index finger of the user as taught by Hayashi into the system of Zloof because this would be comfortable worn and very easily operated by forefinger pressure.

Regarding claim 5, Zloof discloses a second housing (24, see figures 1-2) and a second click sensor (46) disposed within an underside of the second housing, the click sensor actuated by user pressing the underside of the second housing through the second finger against the first external surface with the sufficient force (see figure 7, column 5, lines 3-14, because the first and second housing are the same features).

Regarding claim 8, Zloof discloses the second finger of the user is a middle finger of the user (see figure 1).

Regarding claims 10 and 17, Zloof discloses a wireless transceiver for wireless communication (12) with a corresponding wireless transceiver of a computing device (14), and such that the actuation of the click sensor and the relative movement detected by optical sensor as discloses by Hayashi and discussed above, therefore the computing device through the wireless communication (see figure 1).

Regarding claim 11, Zloof discloses in figure 1-2, a second housing attachable to a wrist (64) of the user and in which the wireless transceiver is disposed; and a cable connecting the second housing (see column 5, lines 63-67).

Regarding claim 13, Zloof discloses the first external surface and the second external surface are the same surface.

Regarding claim 14, Zloof discloses in figures 1-2, a pointing device comprising a first and second housing (22, 24) each housing substantially shaped to fit a finger of a user; a first and second click sensor, each click sensor disposed within an underside of a corresponding one of the first and second housing and actuated by the user pressing the underside of the corresponding one of the first and the second housing through the finger against a first external surface with sufficient force; and as discussed in claim 1 above.

However, Zloof does not disclose an optical sensor disposed within a surface of only the first housing, the optical sensor detecting relative movement of the surface of the housing against a second external surface caused by relative movement of the finger of the user that the first housing is substantially shaped to fit. Hayashi discloses in figures 1-2, an optical mouse (3) having optical sensor to detect the X and Y directions (see optical fiber from connection cable 3, and connected to finger 2 made of elastic material, abstract, see 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an optical mouse having optical sensor to detect the X and Y directions and connected to finger as taught by Hayashi into the system having the first housing (22) of Zloof because this would detect the migration direction and movement magnitude by forming the optical pattern in the mouse pad and reading this optical pattern optically (see 0002).

Regarding claim 15, Zloof discloses an inherent grip situated at an end of each of the first and second housing (22, 24 because a grip should stick to the housing).

Regarding claims 9 and 16, Zloof discloses a first and second housing shaped to fit a finger of user as discussed above. However, Zloof does not disclose wherein a cable ending in a connector for connection to a computing device, such that the actuation of the click sensor and relative movement detected by the optical sensor are registered with the computing device through the cable. Hayashi discloses in figure 1, a cable (3) ending in a connector for connection to a computing device, such that the actuation of the click sensor and relative movement detected by the optical sensor (see are registered with the computing device through the cable (see optical fiber from connection cable 3, and connected to finger 2 made of elastic material, abstract, see 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of cable as taught by Hayashi is connected to computing device of Zloof because this would transmit the information to the computer.

Regarding claims 18-20, Zloof discloses a pointing device comprising a fit finger, a means for detecting actuation by the user disposed within the finger (see pressure sensing element 46, see column 5, lines 3-14), a means for detecting relative movement of the surface of the housing (see pressure sensor 70, see figure 12), against an external surface external to the pointing device (see figure 12, column 4, lines 53-65).

However, Zloof does not disclose a glove of a first and second finger. Hayashi discloses the first, second, third fingers (see figure 1, see 0017). It would have been obvious to one of ordinary skill in the art at the time the invention was made for using of the finger glove as taught by Hayashi into the system of Zloof because this would protect the fingers with sufficient flexibility or elastic.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zloof (US patent 5,489,922) in view of Hayashi (JP 08-054980) as applied to claims 1-11 above, and further in view of Iwasaki (Patent application Publication 2002/0024502).

Zloof and Hayashi disclose a first and second housing shaped to fit a finger of user as discussed above. However, Zloof and Hayashi do not disclose an expansion slot disposed within the second housing and receptive to a corresponding expansion card, data stored on which is accessible to the computing device through the wireless communication. Iwasaki disclose in figure 6, a mouse (40) having a slot (22a), and the storage medium 21 (expansion card) inserted or taken out of the housing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a slot and the storage medium can be inserted into the housing of the mouse as taught Iwasaki into the system of Zloof and Hayashi having second housing because this would record new data by the interchanging the card memory of the mouse system.

#### ***Response To Arguments***

4. Applicant's arguments with respect to claims 1, 14, 18 filed on 2-20-04 have been considered but are moot in view of the new ground(s) of rejection.



*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D. C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only).**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen  
December 21, 2004



**ALEXANDER EISEN  
PRIMARY EXAMINER  
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